

## CLAIMS

What is claimed is:

1. An apparatus for treating golf ball surface comprising a sealed casing, a tumbler for holding golf balls in the casing, and an electric source for applying high voltage across the electrodes in order to generate glow discharge, wherein the improvement comprises the tumbler further having:  
a plurality of perforated holes in a staggered pattern covering a substantial portion of the tumbler surface.
2. The apparatus according to claim 1, wherein the plurality of holes are individually machined.
3. The apparatus according to claim 2, wherein the holes have a curved radius machined about their outer edges.
4. The apparatus according to claim 3, wherein the radius is about 0.06 to 0.12 inches.
5. The apparatus according to claim 2, wherein the plurality of holes have a through diameter greater than about 0.25 inches and less than about 0.50 inches.
6. The apparatus according to claim 1, wherein the pattern includes through-holes of about 0.375 inch diameter on a 0.750 inch staggered pattern.
7. The apparatus according to claim 1, wherein the pattern yields an open hole surface area of greater than 50 percent.
8. The apparatus according to claim 1, wherein the basket comprises aluminum sheet metal approximately 0.25 inches to 0.375 inches thick, the sheet metal having a hard anodic coating applied thereon.

9. Method for treating a plurality of golf ball surfaces by subjecting uncoated golf balls in rotating tumbler to unpolymerizable gas plasma
10. Method as claimed in claim 9, in which the rotating tumbler is a cylindrical basket having a plurality of perforated holes in a staggered pattern covering a substantial portion of the basket surface.
11. Method according to claim 10, wherein the plurality of holes are individually machined.
12. Method according to claim 11, wherein the plurality of holes have a curved radius machined about their outer edges.
13. Method according to claim 12, wherein the radius is about 0.06 to 0.12 inches.
14. Method according to claim 11, wherein the plurality of holes have a through diameter greater than that about 0.25 inches and less than about 0.50 inches.
15. Method according to claim 9, wherein the staggered pattern yields an open hole surface area greater than 50 percent.
16. Method according to claim 9, wherein the tumbler is made from aluminum sheet metal approximately 0.25 inches to 0.375 inches thick, the sheet metal having a hard anodic coating applied thereon.
17. An apparatus for treating golf ball surface comprising a sealed casing, a tumbler for holding golf balls in the casing, and an electric source for applying high voltage in order to generate glow discharge, wherein the improvement comprises:  
the tumbler further having a plurality of holes having a diameter of between 0.25 and 0.50 inches and edge radii of between 0.06 and 0.12 inches.